

SELF-CONCEPT OF STUDENTS IN INCLUSIVE SETTINGS

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The present evaluation case study investigates the self-concept of the students from 7th grade in regular primary school. The study results indicate that, in comparison to their hearing peers, integrated students with a hearing impairment have a lower academic and social self-concept, as well as a general self-concept but a higher physical self-concept. There are differences among students with a hearing impairment in both the individual dimension and general self-concept. There are no statistically significant differences between the class with integrated students, on the one hand, and the class without them, on the other; however, there is a noticeable advantage for the students from the class with integrated learners over the other class serving as control group in all three individual dimensions as well as in general self-concept.

The inclusion of students with special needs into regular primary schools is a focal point of debate in education systems across the world. It is clear today that inclusion has emerged as a key issue of government educational policy in many European countries. There is special emphasis on educational, social and moral issues related to children with special needs who are being educated in regular schools. The physical presence of children with special needs in the classroom (physical integration) does not by itself ensure a child's progress and development, unless functional and social integration are also provided. It is urgent that teachers make curricular and educational provisions and especially that they focus their attention on developing the dimensions of self-concept (academic, social, physical). Implementation of inclusion in the current practice requires that teachers be primarily responsible for educating all the children in the classroom (Jenkins, Pious, Jewell, 1990). In creating the inclusive learning environment, teachers should establish a partnership with special educators in making the necessary adaptations to the curriculum and teaching strategies in a manner that will allow for learning in such a diverse group of learners (Friend, Bursuck, 1996).

The results of effective inclusive practice lead to the conclusion that inclusive classrooms do not hinder the academic achievement of typical students and may have many social and developmental advantages for students with or without disabilities (Peltier, 1997; Staub, Peck, 1995).

Self-concept

Self-concept is an individual's awareness of her/his own identity. There are three aspects of this concept: self-image (of what the person is), ideal self (what the person wants to be) and self-esteem (what the person feels about the discrepancy between what s/he is and what s/he would like to be) (Lawrence, 1996).

Self-concept at school seems to be affected by the image that other significant persons (teachers, parents, peers) have of the pupil (Burns, 1982; Cugmas, 1992; Harter, 1986) and by social comparison with others in the same setting (Rogers, Smith, Coleman, 1978). Different social environments would therefore be expected to influence an individual's self-concept in different ways. Rohner's theory (1980, reviewed in Mrug, Wallander, 2002) postulates that feeling accepted or rejected by one's significant others will affect the way a person views and evaluates oneself and the world. Feeling rejected by others will lead to greater hostility, low self-respect, emotional instability and unresponsiveness, and a negative view of the world,

whereas feeling accepted by others will lead to a lower feelings of hostility, higher self-concept, emotional stability and responsiveness, and a positive view of the world.

The importance of self-perception for the growth and development of children has been demonstrated in studies showing how self-efficacy can enhance or impair the level of cognitive functioning and performance (Bandura, 1989). A child's expectations about his own capabilities determine his behavior and influence his motivation, effort, and persistence regarding both the difficulty of the task and task efficacy.

Studies have clearly demonstrated how important the roles teachers have and how strong an influence on self-concept they have in creating relationships with students during school activities (Schweinhart, Weikart, Lerner, 1986). The process leading to an enhancement of or decrease in the learner's self-concept begins with the interaction between teachers and students.

The self-concept of students in inclusive settings

Recognizing the mechanisms of mutual functioning of the teacher on students' self-concept and achievements is extremely important for the success of integrated students with special needs (Fulgosi - Masnjak, 2003). Enhancing the self-concept of students with special needs that are included in regular primary school classes has a positive impact on their academic achievements as well as on their personal and social development. Factors that appear to influence the self-concept of students with special needs include the following: severity or degree of disability, age of onset of disability, acceptance of the disability by parents, type of schooling (education in regular school or special school) and special support, labeling, and identification group adherence (Cambra, 2002; Jambor, Elliott, 2005; Montgomery, 1994; Mrug, Wallender, 2002; van Gurp, 2001; Westling Allodi, 2000).

Earlier research conducted on the self-concept of deaf or hard of hearing students and their hearing peers in regular settings has shown inconsistent results. On the one hand, research (Leigh, Stinson, 1991; Leob, Sarigiani, 1986; Maxon, Brackett, van den Berg, 1991) has reported finding lower self-concept in students with hearing impairments in comparison to their hearing peers, whereas others have found no significant differences between the groups (Cates, 1991; Koelle, Convey, 1982). The study of Appleton, Minchom, Ellis, Elliott, Boll and Jones (1994) compared 79 young people with physical disabilities, in terms of global self-worth and their perceived self-competence in 9 fields, to their peers without disabilities. They discovered that young people with a disability reported a lower degree of perceived competence in academic and athletic domains and in social acceptance, but there were no differences in the perception of their control of perceived self-competence in connection with behavior conduct, or in their global self-worth.

A study on the self-concept of children with learning disabilities (Montgomery, 1994) and receiving support in regular classes shows that those children have a lower academic self-concept than their peers without disabilities, but the two groups do not differ in global self-concept or in other dimensions of self-concept, like social competence, affective, physical, or family.

The results of more recent studies (Cambra, Silvestre, 2003) indicate significant differences between integrated students (students with hearing impairments, physical disabilities and learning disabilities) and their counterparts in the social and academic dimensions, which is lower in children with special needs, but the differences in physical self-concept dimension are not statistically significant.

An intercultural study (Mrug, Wallender, 2002) in which the authors compare the self-concept of young people with physical disability in The Czech Republic and The United States to that of a normative sample of Czech students without a disability confirmed that the self-concept of young people with a physical disability integrated into regular classrooms did not differ from the self-concept of their peers. In a three year study (Walter-Thomas, Bryant, Land, 1996) in which researchers supervised the implementation of the co-teaching model in an inclusive setting revealed that both groups of students, those with a disability and those without a disability, experienced improvement in social skills, and all students experienced an increase in self-concept related to their social abilities and accomplishments. The teachers who participated in the study noticed that the children with special needs experienced an increase in positive attitudes

towards themselves and others, a higher degree of motivation and an ability to assess more objectively their skills or weaknesses.

As in many other countries, Slovenia evidently has many more children with special needs who are educated in regular primary schools than in special schools. But the empirical studies that would investigate the self-concept of children with different types of special needs and their peers in regular primary schools have not yet been conducted. This task will necessarily have to be done in the near future.

The study that was performed within the project *Integration of Children with Hearing Impairments into the Regular Primary School* analyzed the self-concept of students with hearing impairments and hearing students. Its results will be presented in the central part of the paper. The regular class including students with special needs was taught by two teachers: a regular teacher and a special educator. The integrated students also attended speech and hearing therapy.

The purpose of formative evaluation

The current formative evaluation of the project *Integration of Children with Hearing Impairments into the Regular Primary School* studies the effects of integration from several points of view:

- (1) individual dimensions of self-concept among pupils, such as the following:
 -academic self-concept, -social self- concept, -physical self- concept
 and
- (2) general self-concept.

We are particularly interested in determining the existence of any differences between children with hearing impairments as a group and their hearing peers on the one hand, and children with a hearing impairment as individuals on the other; and also the class of students including children with hearing impairments (i.e. experimental group - EG), as opposed to the class without integrated pupils (as a control group - CG).

Method

Research method

The evaluative case study is based on a descriptive and causal, non-experimental method of pedagogical research.

Research sample

Our research sample includes students from two 7th grade classes from a primary school (n=42) that started implementation of the project *Integration of Children with Hearing Impairments into the Regular Primary School* in the year 1997/1998. In one of the classes there are, besides the hearing pupils (n=17), three pupils with a hearing impairment. In the case of two hard of hearing boys, a severe hearing impairment was identified (71-90 dB), and in the case of the girl a profound hearing impairment (above 90 dB); in all three students the loss of hearing appeared in the pre-natal period. The second class was an ordinary regular class, with no integrated students (n=22).

Data collection procedure

To acquire information, a scale of alternative appraisals, Self-concept Scale by the authors Cambra and Silvestre (2003), was used (c. f. appendix). The scale consists of 23 statements (is or isn't true/so), which are connected to the academic, social and physical dimension of self-concept. The original scale Cronbach coefficient α is 0.806. The reliability of the scale is confirmed in our case by a Cronbach coefficient calculated at $\alpha = 0.752$.

Data processing procedure

The collected data were processed by the following procedures:

- graphic presentation of means (M) of the points in individual dimensions and general self-concept of hearing and hearing-impaired students (EG);
- graphic presentation of percentage of acquired points in individual dimensions and general self-concept of three integrated students;

independent samples of t-test with Levene F-test of homogeneity of variances for testing the differences between EG and CG in individual dimensions and general self-concept;

the square of the point bi-serial correlation coefficient (r_{pb}^2) as the measure of effect size, interpreted in agreement with Cohen guidelines (1988, p. 284-288), namely 0.010 to 0.058 for a minor effect, from 0.059 to 0.137 a medium effect, and from 0.138 on for a large effect;

graphic presentation of the distribution of means of the points in individual dimensions and general self-concept of the students in EG and CG.

Results

First we present the results of the analysis of integration effects on the students in EG, followed by the results connected to the comparison of EG and CG.

Self-concept of students from the class with integrated hearing-impaired children (EG)

Analysis of the differences between students with a hearing impairment and hearing students

The differences between integrated students with a hearing impairment as a group (n=3), on the one hand, and their hearing peers as a group on the other were investigated, in terms of the following: individual dimensions of self-concept (academic, social and physical), general self-concept.

Table 1
Mean (M) and absolute differences of means (Mn –Mh) of individual dimensions and general self-concept

Dimensions	Group	Mean (M)	Difference Mn -Mh
Academic (5)	Non-hearing	4.0	0.2
	Hearing	4.2	
Social (12)	Non-hearing	9.7	0.9
	Hearing	10.6	
Physical (6)	Non-hearing	5.3	0.4
	Hearing	4.9	
General (23)	Non-hearing	19.0	0.7
	Hearing	19.7	

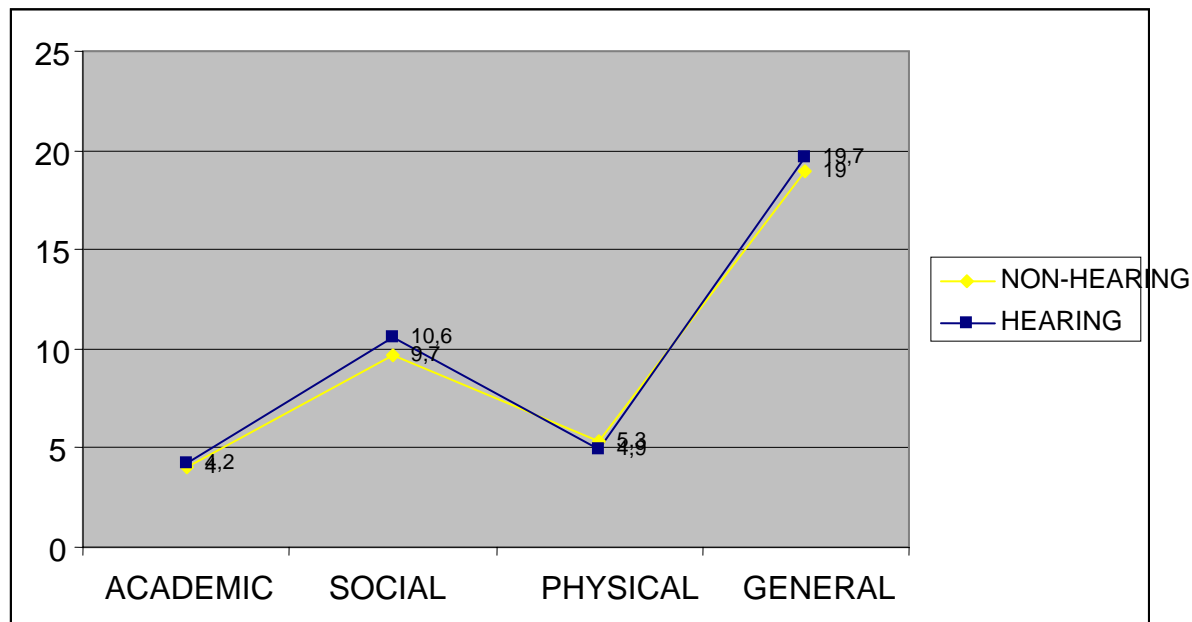


Figure 1
Mean of points in individual dimensions and general self-concept of hearing students and those with a hearing impairment in EG

As shown in Figure 1 above, students with a hearing impairment have a lower academic and social self-concept and general self-concept than their hearing peers but a higher physical self-concept. The difference in the sense of advantage to the hearing students is least in the case of academic self-concept (only 0.2 points) and the greatest in social self-concept (0.9 points).

It is very convenient that students with a hearing impairment have a relatively similar, quite high ($M = 4$ at $\text{max.} = 5$) level of self perception in the field of school work compared to their hearing peers. This evidently shows that integrated students achieve, with the necessary accommodations, the set teaching aims along with their hearing peers and hereby experience the feeling of success, which provides important experience for the formation of a positive self-concept. Some foreign studies like Kluwin (1993), Kluwin, Gonsher (1994), Kreimeyer, Crooke, Drye, Egbert and Klein (2000) also report positive academic achievements of students with a hearing-impairment in integrated settings.

The social self-concept of integrated students with a hearing impairment is lower than the academic. It is obvious that communication problems as a secondary consequence of the loss of hearing present more obstacles in establishing social relationships than in achieving the learning aims. Nevertheless, the average level of social self-concept, like the academic one, is relatively high ($M = 9.7$) with regard to the maximum number of points (12).

It is interesting, not to mention unexpected, to discover an advantage for the integrated students with a hearing impairment over their hearing peers from the point of view of physical self-concept. This leads to a question about the reasons for their increased satisfaction with their physical appearance. It is probable that students with a hearing impairment, when they compared their physical appearance with that of their peers, reached the conclusion that they perceive similarities in all external characteristics (physical appearance, dress), and their self-assessment also leads to the belief that they obviously accept themselves as they are. Such positive results in the dimension of physical self-concept are to be understood in the context of the long-term influence of the effects of integration on their adaptation to the group and the development of feelings of adherence to the majority, that is, to their hearing peers, with whom they find common characteristics. We assume that, by means of physical self-concept, the hearing-impaired students compensate for any negative feelings about the formation and establishment of social relationships and probably also their feelings about academic achievements, so that they attempt to maintain a stable, and positive self-concept (c.f. Cambra and Silvestre, 2003, p.205). It is necessary to emphasize once again that the averages of points (5.3 in EG and 4.9 in CG) according to the potential range (6) are high, which speaks in favor of the existence of a favorable level of physical self-concept among the students.

Analysis of the differences among students with a hearing impairment as individuals

The existence of differences among three integrated students (one girl and two boys) with a hearing impairment (S3, S1 & S2) was tested according to the following:
individual dimensions of self-concept (academic, social, and physical self-concept),
general self-concept.

Table 2
Percentage (%) of points achieved according to individual dimensions and general self-concept

Dimensions (total number of points)	Students	%
Academic (5)	S3	10.0
	S1	60.0
	S2	80.0
Social (12)	S3	50.0
	S1	91.7
	S2	100.0
Physical (6)	S3	83.3
	S1	83.3
	S2	10.0
General (23)	S3	69.6
	S1	82.6
	S2	95.7

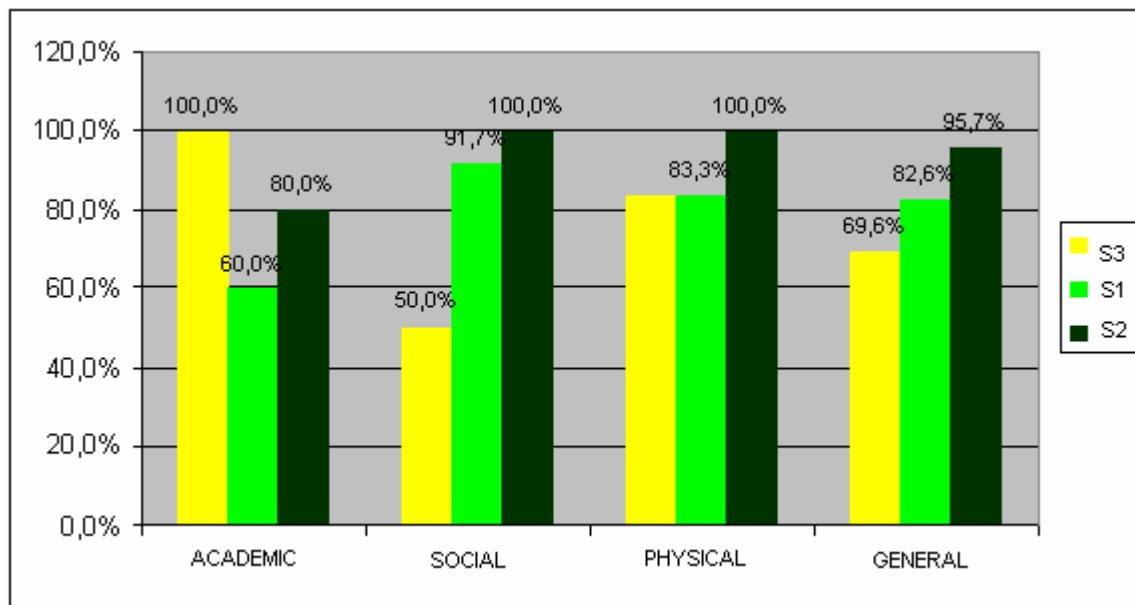


Figure 2
Percentage of points achieved in individual dimensions and general self-concept of three integrated students (S1, S2, and S3)

The data presented in these tables and charts account for interpretation according to individual dimensions and according to students.

Interpretation according to individual dimensions:

The highest level of academic self-concept occurs in S3, followed by S2 and S1.

Social self-concept is highest in S2, who achieved all possible points, S1 follows with one less point, whereas S3 scored much less, just below half the points and therefore has a much lower social self-concept.

Physical self-concept is also highest in S2, with all possible points, followed by both S1 and S3 with an equal number of points achieved.

From the point of view of general self-concept, S2 comes first, followed by S1, and then S3

Interpretation according to individual students

S3 has the highest academic self-concept (100%), physical self-concept comes second (83.3%) and the lowest level (50%) is achieved in social self-concept. S3 self assesses the area of learning as his strongest point; this is followed by physical appearance, and the weakest point would be the area of social interaction (establishing social relationships or contacts).

S1 has the highest social self-concept (91.7%), followed by physical self-concept (83.3%) and the lowest academic self-concept (60%). Compared to S3, S1 feels stronger in social functioning and weaker in achieving academic results.

S2 assesses both his social and physical self-concept equally high (100%), but his academic self-concept is lower (80%). This student is very confident in establishing social contacts, is completely satisfied with his physical appearance and slightly less (but still more than S1) with his academic achievements.

The differences that appear among the integrated students with a hearing impairment are most likely the result of intrinsic and extrinsic factors like their hearing status, linguistic and communicative level, acceptance of the disability by parents, social environment and others, all of which additionally influenced or affected their self-concept (Cambra, 2002, van Gurp, 2001), but these were not the subject of investigation in the present study.

Self-concept of students in the classes compared as a whole

Our attention is focused on the differences among students from the class with integrated learners with hearing impairment (EG) and the class without them (CG) in terms of the following:
individual dimensions of self-concept (academic, social, and physical,
general self-concept.

Table 3
Results of the t-test of differences between EG and CG in individual dimensions and general self-concept plus r_{pb}^2 as a measure of effect size

Dimensions (total/ possible points)	Group	Mean	Standard deviation	F- test of homogeneity of variances		T - test of difference between two means		Point bi-serial correlation coefficient r_{pb}^2
		M	SD	F	P	t	P	
Academic (5)	EG	4.150	1.089	0,009	0,926	1.213	0.232	0.035
	CG	3,727	1.162					
Social (12)	EG	10.450	1.820	0,017	0,897	0.911	0.368	0.020
	CG	9.955	1.704					
Physical (6)	EG	5.000	0.973	2,252	0,141	1.273	0.210	0.039
	CG	4.546	1.299					
General (23)	EG	19.600	2.981	1,392	0,245	1.333	0.190	0.042
	CG	18.227	3.624					

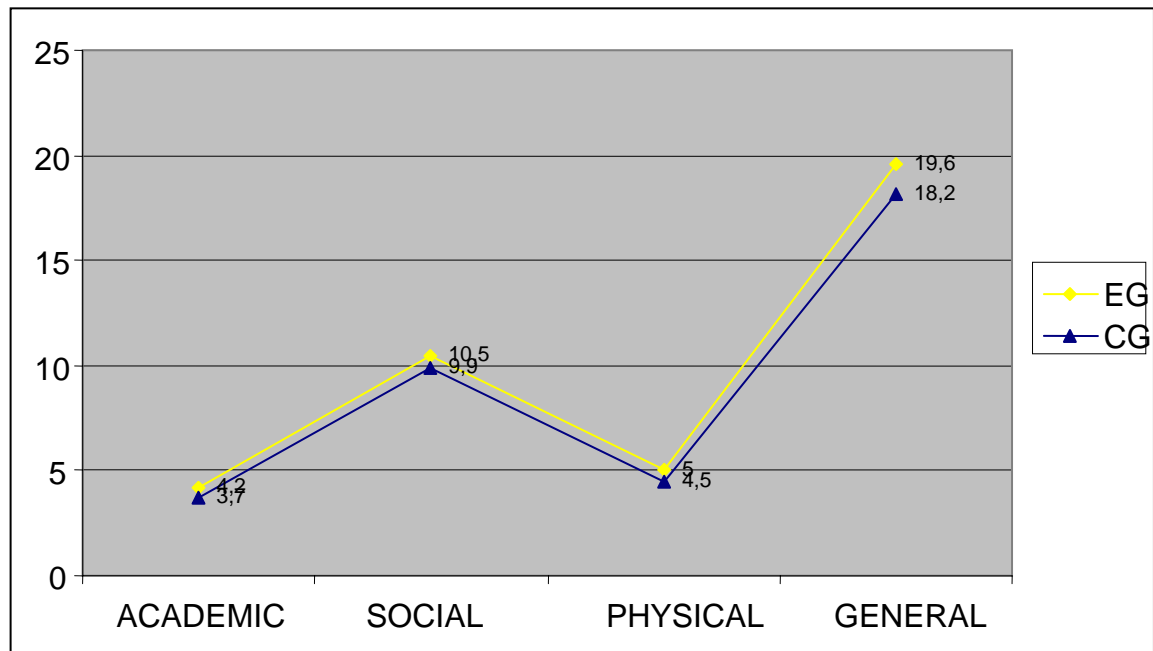


Figure 3
Distribution of means of points in individual dimensions and general self-concept of students in EG and CG

In all four cases of the t-test, the hypothesis of the homogeneity of variances is justified ($P > 0.10$). Both in individual dimensions and in general self-concept the differences between the groups are not statistically significant. The r_{pb}^2 values also show that the effect size is small - below 5%. But the table presenting means, and its graphic presentation in particular, clearly show that the EG, namely the group with three non-hearing students, has an advantage over the CG in all dimensions and in general self-concept.

Based on these findings, it is safe to conclude that the chosen model of integration is not one of the factors which would endanger the development of students' self-concept; on the contrary, it really works, although statistically speaking with a smaller effect, affecting their academic, social, and physical self-concept as well as general self-concept in a positive way. However, it is imperative to mention that during the time of inclusive education we should systematically and consistently direct the attention of teachers, special educators, parents and students to the development of strategies and programs for the encouragement of academic and social development of children with special needs.

Conclusion

The present evaluative case study was performed to investigate the effects of integration from the point of view of the self-concept of learners from 7th grade included in the project *Integration of Children with Hearing Impairments into Regular Primary School*. We pursued the existence of differences in individual dimensions and general self-concept between a group of hearing students and students with hearing impairments, among the students with hearing impairment as individuals, and between the class of students with integrated hearing-impaired students, on the one hand, and the class without integrated learners, on the other.

The following basic findings were obtained:

Compared to their hearing peers, integrated learners have a lower academic and social self-concept, as well as general self-concept, but a higher physical self-concept.

There are differences among the students with a hearing impairment in both individual dimensions and general self-concept. For example, S3 (the girl with very good grades) has the highest academic self-concept and the lowest social self-concept; S1 (the boy with good grades) has exactly the opposite, the highest social and the lowest academic self-concept, whereas S2 (the boy with very good grades) displays the same – the highest - level of social and physical self-concept, followed by the academic one.

There are no statistically significant differences between the class of integrated hearing impaired students, on the one hand, and the class without them, on the other; however, there is a noticeable advantage among students from the class, with integrated learners over the other class, which served as control group in all three individual dimensions as well as in general self-concept. In their studies, authors like Burnstein, Sears, Wilcoxon, Cabello and Spagna (2004); Katz and Mirenda (2002); Walter-Thomas et al. (1996) claim that an inclusive environment with the appropriate support of teachers and special educators does not hinder the academic development and self-concept of peers without disabilities; on the contrary, they emphasize the existence of positive effects and benefits for the children without disabilities as well as for the children with disabilities, a result which was confirmed by our study.

Based on our findings, it is possible to conclude that the project has positive effects on the self-concept of both students with hearing impairments as well as hearing students, so the applied model of integration is defined as an effective, empirically tested model that is entitled to maintain its position in the practical future implementation of the integration process in our country. Nevertheless, the results of the present study from the aspect of self-concept should not be uncritically overgeneralised.

At a time when integration of children with special needs into regular schools is on the increase, even though conditions for inclusion have not been appropriately fulfilled everywhere, it is necessary for Slovenes to provide systematic supervision for individual cases of integration and empirical analysis of the self-concept of children with and without special needs.

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**APPENDIX 1:
SELF-CONCEPT SCALE**

Academic self-concept is defined by the statements (5) from the assessment scale related to school work:

- S 1: It's easy to study;
- S 4: My teacher thinks I'm unfriendly;
- S 9: I don't study much;
- S 13: The teachers treat me well;
- S 17: I get bad marks.

Social self-concept is defined by the statements (12) from the assessment scale related to the establishment of social relationships:

- S 3: When I have a problem, I ask;
- S 5: I prefer to be on my own rather than with my friends;
- S 7: I think my classmates like me;
- S 8: I'm nearly always unfriendly with others;
- S 10: It's hard to have friends;
- S 12: The others want to play with me;
- S 14: I often get angry with my classmates;
- S 16: After arguing with someone, I talk to them;
- S 18: The others want to do class work with me;
- S 21: My classmates are my friends;
- S 22: I don't play much with my classmates;
- S 23: I would like to have more friends like me out of school.

Physical self-concept is defined by the statements (6) from the assessment scale related to the physical appearance of the learners:

- S 2: I like my body (face, hands, etc.);
- S 6: I'm ugly;
- S 11: I'm bad at lots of things;
- S 15: I like to wear nice clothes;
- S 19: There are parts of my body that I don't like;
- S 20: I'm happy the way I am.